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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Confirmation No. 6549
Kiyoshi NAKADE : Docket No. 2002_0087A
Serial No. 10/059,235 : Group Art Unit 3765
Filed January 31, 2002 : Examiner R. Muromoto, Jr.
SLASHER

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action dated September 8, 2004. In view of the following representations, reconsideration is respectfully requested.

On page 2-4 of the Office Action, claims 1-3, 8, 9, and 16-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the conventional slasher described on pages 1-2 of the present application in view of the teachings of Lambert et al. (U.S. Patent No. 4,577,476) and Himes (U.S. Patent No. 5,904,773).

In the rejection, the Examiner takes the following positions:

1) It would have been obvious to modify the **conventional slasher** by replacing the moistening device (in which the warp yarns are immersed in a water tank) with an apparatus for applying atomized spray solution to fabric taught by **Lambert**. The motivation for the proposed combination is that the Lambert apparatus would provide a uniform pickup on yarns and fabrics; and

2) In consideration of the fact that the **conventional apparatus**, as modified by **Lambert**, does not include a moistening unit over the warp sheet, the **Himes** reference is applied to teach a fluid delivery apparatus with dispensers disposed above and below an article to be treated. The rejection modifies the moistening unit of the proposed combination so that fluid is applied from above the fabric. The motivation for modifying the "modified" conventional apparatus is that "fabric is conveyed in a longitudinal, horizontal path of travel as well."

Regardless of the combination resulting from the three references, there clearly is no motivation to combine the references in a manner that would result in Applicant's invention as defined in claims 1 and 22. As will be demonstrated below, the Lambert apparatus must be disposed below the fabric 8.

Although not clear from the statement of the rejection, the "Response to Arguments" makes it clear that the Examiner is suggesting that the Lambert device for applying "atomized" fluid can be inverted to apply the solution from above the fabric. The Examiner cites lines 38-42 of col. 3 of Lambert in support of this position. The referenced text states:

"It is further obvious that negative pressure means (not shown) can be provided to draw the solution cloud from chamber 1 through opening 5 and

into contact with fabric 8 as an alternative to the positive pressure description set forth above."

It is respectfully submitted that the Examiner's interpretation of the Lambert reference is not correct. The referenced text merely describes that a negative pressure source could be used with the apparatus shown in Fig. 1 to draw the solution cloud through opening 5. In other words, the referenced text broadly states that the apparatus could be used with a negative pressure source rather than internal air pressure, which is described in col. 2, lines 2-10. However, this clearly doesn't suggest that the device could be turned upside down and still apply a uniform amount of solution to the fabric.

The Examiner's attention is directed to the fact that Lambert employs a pump 10 to collect and recycle unused solution that has collected on the bottom side 15. Clearly, if the Lambert device were operated in an upside down position, the solution would simply run out opening 5 and onto the fabric. The proposed modification clearly would destroy the intended purpose of the Lambert apparatus, which is to accurately apply solution to the fabric. If a proposed combination would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Even assuming, arguendo, that Lambert could be employed in the conventional apparatus as suggested by the Examiner, the resulting arrangement would not "sprinkle" the solution as required in claim 1. Furthermore, it's not clear what the Himes reference adds to the combination. Himes teaches an arrangement in which fluid is simultaneously sprayed onto upper and lower sides of an article. The fact that it is possible to spray an

article from either side does not provide the necessary motivation to modify the conventional apparatus as already modified by Lambert. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

In view of the above, it is clear that there exists no motivation to combine the references in the manner suggested by the Examiner. Therefore, the Examiner is requested to withdraw the rejection of claims 1-3, 8-9 and 16-22.

Further, as discussed in the previous response, Lambert discloses a finishing apparatus for applying an "atomized" spray solution to a fabric in order to produce a uniformly finished fabric. Note that the Lambert device is a solution to the problems inherent with wet pickup finishing accomplished by "spraying, immersion, padding, foam application, engraved roll, kiss roll, loop transfer and knife coating" (see col. 1, lines 9-12).

In the Lambert device, a chamber 1 is fitted with two spray nozzles that deliver air and solution from a storage tank 24. Additional air is supplied to chamber 1 through manifold 3 which is located below the spray nozzles 2. The additional air increases the velocity of the atomized spray particles, and aids in transporting the "atomized" particles upwardly through upper opening 5 so as to bring the solution into contact with a fabric 8.

With the Lambert apparatus, the application rate of the solution to the cloth per unit of time is small, and it takes a significant amount of time to apply a sufficient amount of solution to the cloth. Accordingly, if the Lambert apparatus were to be employed in a unit for applying moisture to a warp sheet, the running speed of the warp sheet would have to be significantly reduced so that a sufficient amount of moisture could be applied to the

warp sheet. Thus, the Lambert apparatus would not be suitable for applying moisture to a warp sheet.

In contrast, the present invention is configured such that the moistening unit is provided over the warp sheet, and water and so forth are sprinkled from above, so that an appropriate amount of moisture can be applied to the warp sheet without reducing the availability factor of the warp sizing unit.

In the proposed Lambert/Himes combination, the Examiner suggests that it would have been obvious to one of ordinary skill in the art "to provide spray from above the fabric since fabric is conveyed in a longitudinal, horizontal path of travel." However, the Examiner does not explain how the Lambert apparatus would have been modified in view of the Himes teachings or provide any explanation as to why such a modification would have been obvious. The fact that the fabric is conveyed in a longitudinal, horizontal path of travel is not a reason to combine the references.

In view of the above, it is submitted that claims 1 and 22 are clearly allowable over the collective teachings of the conventional slasher, and the Lambert and Himes patents.

Further, Applicant continues to assert that the object of the Lambert device (i.e., uniformly applying a solution to fabric) addresses a technical problem that is completely different from that addressed by the present invention, and thus the nature of the problems to be solved are different.

Also, the technical challenge of the present invention is completely new in the field of sizing, and the improvement to the moistening unit would not have been obvious in view of the teaching of Lambert since the teachings of Lambert would have only been applicable to a finishing apparatus. In the conventional device, the finishing apparatus is represented

by the sizing unit 5 and a drying unit 6. The moistening unit of the conventional device is not a finishing apparatus, but rather is an apparatus for applying moisture in advance of the warp finishing process. Thus, any application of the teachings of Lambert in the environment of the conventional slasher would be to the finishing apparatus (i.e. the sizing unit). In other words, the Lambert teachings clearly are not applicable to the moistening unit of the conventional device. Therefore, there is no suggestion or motivation to modify the conventional slasher as proposed by the Examiner.

In view of the above, it is submitted that the present application is now clearly in condition for allowance. The Examiner therefore is requested to enter the above amendment and pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

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